

**Mohawk Valley Community College
Utica and Rome, NY**

Syllabus for Electrical Circuits 1 ES291

Instructor: Jim Fiore, Professor

Semester: Fall 2020

Phone: 792-5589

Note: I will not be on physical campus this semester.

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Office: AB281B

Catalog Description: This course presents a calculus-based introduction to linear circuit analysis. Topics include electrical laws, quantities, and DC and AC circuits. Analysis techniques include mesh and nodal approaches, Thevenin, Norton, superposition, and source transformation, as well as phasor analysis. Balanced three-phase and transformer circuits are presented, analysis techniques are discussed, and computer-based circuit simulation tools are introduced.

Corequisites: MA253 Calculus 3 and PH262 Engineering Physics 2.

Student Learning Outcomes:

- The student will demonstrate a firm understanding of the behavior of DC and AC electrical circuits.
- The student will demonstrate analytical skills and insights that will be expanded and applied to more advanced circuits encountered in later courses.
- The student will use a mathematical and problem solving approach for introductory circuit analysis, based on fundamental DC and AC circuit principles and math concepts. This will include the use of computer simulations.
- The student will demonstrate facility at constructing and troubleshooting basic DC and AC circuits in the laboratory with proper use of test equipment.
- The student will demonstrate the command of appropriate communication skills, particularly technical reports through the laboratory.
- The student will demonstrate the ability to work as part of a technical team, particularly in the laboratory.

Text: [Electric Circuits/10E](#), Nilsson-Riedel, Pearson Publishing Company

[DC & AC Electrical Circuit Analysis](#), Fiore. These are alternate free OER texts available on the class web page

[Laboratory Manuals for DC & AC Electrical Circuit Analysis](#), Fiore. Also free OER available on the class web page.

[TINA](#), [TINA-Cloud](#), or [TINA-TI](#) can be used for circuit simulations (the last one is free).

Office Hours: Virtual, email as convenient or use Blackboard.

Communication Policy: Generally, email is the most efficient means of getting a hold of me as I usually check it multiple times per weekday and on weekends. Make sure to check my home page and the course page first (see below).

Class Cancellation: A list of class cancellations can be found on the MVCC website: www.mvcc.edu

Web: My home page is: www.mvcc.edu/jfiore. Virtually everything you will need to know about this course including associated grading standards and requirements can be found on the course web page via my site ([ES291 Electrical Circuits 1](#) link). This includes a complete week-by-week outline of chapter readings, homework, work sheets, lab assignments and approximate test dates. My current schedule is available on my home page along with utilities, manufacturer's links, lab and class guidelines, and other useful items.

Grading Policy: The final grade is based upon an accumulation of points: There will be 2 or possibly 3 one-hour-comparable tests worth 100 points each, lab work/reports is worth 200 points, and up to 100 points for other graded assignments (if any). Finally, up to 100 points will given for participation and readiness on Blackboard discussions, chats, Zoom meetings and the like. This policy will be strictly adhered to in all but the most special cases. Lab work is an integral part of this course and thus students not performing labs and failing to hand in reports will automatically fail this course, regardless of test grades. Students not taking tests without a valid excuse will receive a grade of 0 on said tests. Make-ups are given at the discretion of the instructor. Tests may be curved up or down when appropriate. It is the student's responsibility to notify the instructor of absence. It is strongly urged that students contact the instructor before small problems become major ones. Any portion of my free time is available for you. Further details on grading and class policy may be found at the link [Class Policy](#) on my main web page.

Labs: Due to the current situation, all labs will be performed using a circuit simulator such as TINA (see above). Unless otherwise specified, all labs require a write-up. These should be neat and legible. Standard technical writing style is expected along with proper grammar and spelling. Reports must be emailed to the instructor in either .odt (preferred) or .doc format. On occasion, other methods of assessment may be required in lieu of the standard report.

Labs will be assigned no later than each Monday and the associated report is due one week later (Mondays at 9:00 AM). The first half-week late creates a one letter grade loss, the second half-week causes a second letter grade loss. Reports are not acceptable beyond one week late. Detailed information regarding the format and grading standards can be found at the link [Common Lab Report Format](#) on my main web page.

Academic Integrity and Civility: Unethical or dishonest behavior may result in failure of the course or other disciplinary actions. **There is a zero tolerance policy regarding cheating on tests or lab work. Anyone found guilty of plagiarism or receiving assistance from third parties on tests (be they human or prohibited resources such as unauthorized web searches), will receive a grade of zero.**

Students with Disabilities

I would appreciate hearing from anyone in the class who has any type of disability (e.g., physical, learning, mental health, vision, hearing, etc.) which may require some special accommodation. Please see me during my office hours so that we can discuss your needs. Before services can begin, you must also contact the Office of Accessibility Resources, 315-792-5644, in Room 129E of Wilcox Hall on the Utica Campus. Staff members will review your documentation, determine your eligibility for accommodations, and decide what those accommodations will be.

DGV Statement

A few years ago, MVCC initiated a program titled “Diversity-Global View” (DGV), which gave each of our graduates a chance to participate in educational experiences designed to increase awareness of intercultural perspectives. Our goal in doing so was to enhance our students’ understanding of the realities faced by individuals as a result of their race, ethnicity, cultural background, gender, sexual orientation, socioeconomic status, academic abilities and interests, age, religious beliefs, and physical ability. To that end, all graduates who matriculated into programs in the fall 2008 or more recently, or who have changed their major since 2008, are now required to complete the DGV components associated with the degree or certificate program in which they are enrolled. For more information please visit <http://www.mvcc.edu/dgv>.

Sustainability Statement

Mohawk Valley Community College is committed to development and implementation of a comprehensive sustainability plan. To that end, we are beginning by asking students, faculty, and staff to actively participate in energy conservation measures and proper recycling on campus. The green bins located in classrooms are for recycling only, not for trash. These are single source recycling containers and no sorting is required. Any materials that cannot be recycled should be placed in garbage cans. It is also important to turn off lights and computers when leaving a room. Together we can make an impact on conserving our resources. Remember to reduce, reuse and recycle!

Civility Statement

Mohawk Valley Community College is committed to civility in and out of the classroom. MVCC believes everyone has the right to an environment that creates the safe opportunity for educational, professional, and social development. MVCC recognizes its responsibility to model and encourage a culture of civil behavior.

Title IX Statement

Title IX states that no person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal financial assistance. Protections also extend to sexual harassment and sexual assault or violence that impairs or interferes with access to equitable educational and employment opportunities. For more information, please visit the Title IX website at www.mvcc.edu/title-ix